

## ABSTRACT OF THE DISCLOSURE

A method and apparatus for welding includes one or more of a welding type power source, a feedback circuit, a wire feeder and a controller. The controller preferably has an eta control circuit responsive to the feedback. It also has a control loop having a response time responsive to the eta output. The controller detects whether or not the process is a fast-tack process, and controls the supply of power according to a first control scheme if the process is a fast-tack process, and according to a second control scheme if the process is not a fast-tack process. The controller sets the run-in wire feed speed as a percentage of weld wire feed speed, preferably obtaining the percentage from the weld wire feed speed potentiometer at start up. The controller enters a calibration mode at start up if a calibration pendant is attached and on. In the calibration mode calibration receiving values from the front panel potentiometers.